



IFWO

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION: US/10/721,922A**

**DATE: 07/29/2004**  
**TIME: 09:40:12**

**Input Set : D:\seqlistcorrected2.txt**  
**Output Set: N:\CRF4\07292004\J721922A.raw**

3 <110> APPLICANT: Pompejus, Markus  
 4       Kroger, Burkhard  
 5       Schroder, Hartwig  
 6       Zelder, Oskar  
 7       Haberhauer, Gregor  
 9 <120> TITLE OF INVENTION: CORYNEBACTERIUM GLUTAMICUM GENES ENCODING PROTEINS  
 10      INVOLVED IN HOMEOSTASIS AND ADAPTATION  
 12 <130> FILE REFERENCE: BGI-132CPCN  
 C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/721,922A  
 C--> 14 <141> CURRENT FILING DATE: 2003-11-24  
 14 <150> PRIOR APPLICATION NUMBER: 09/6027777  
 15 <151> PRIOR FILING DATE: 2000-02-23  
 17 <150> PRIOR APPLICATION NUMBER: 09/603124  
 18 <151> PRIOR FILING DATE: 2000-06-23  
 20 <150> PRIOR APPLICATION NUMBER: US 60/141031  
 21 <151> PRIOR FILING DATE: 1999-06-25  
 23 <150> PRIOR APPLICATION NUMBER: US 60/143694  
 24 <151> PRIOR FILING DATE: 1999-07-14  
 26 <150> PRIOR APPLICATION NUMBER: US 60/151778  
 27 <151> PRIOR FILING DATE: 1999-08-31  
 29 <150> PRIOR APPLICATION NUMBER: DE 19931418.7  
 30 <151> PRIOR FILING DATE: 1999-07-08  
 32 <150> PRIOR APPLICATION NUMBER: DE 19932124.8  
 33 <151> PRIOR FILING DATE: 1999-07-09  
 35 <150> PRIOR APPLICATION NUMBER: DE 19932126.4  
 36 <151> PRIOR FILING DATE: 1999-07-09  
 38 <150> PRIOR APPLICATION NUMBER: DE 19932127.2  
 39 <151> PRIOR FILING DATE: 1999-07-09  
 41 <150> PRIOR APPLICATION NUMBER: DE 19932133.7  
 42 <151> PRIOR FILING DATE: 1999-07-09  
 44 <150> PRIOR APPLICATION NUMBER: DE 19932207.4  
 45 <151> PRIOR FILING DATE: 1999-07-09  
 47 <150> PRIOR APPLICATION NUMBER: DE 19932208.2  
 48 <151> PRIOR FILING DATE: 1999-07-09  
 50 <150> PRIOR APPLICATION NUMBER: DE 19932225.2  
 51 <151> PRIOR FILING DATE: 1999-07-09  
 53 <150> PRIOR APPLICATION NUMBER: DE 19932229.5  
 54 <151> PRIOR FILING DATE: 1999-07-09  
 56 <150> PRIOR APPLICATION NUMBER: DE 19932914.1  
 57 <151> PRIOR FILING DATE: 1999-07-14  
 59 <150> PRIOR APPLICATION NUMBER: DE 19933006.9  
 60 <151> PRIOR FILING DATE: 1999-07-14  
 62 <150> PRIOR APPLICATION NUMBER: DE 19940765.7

(ps.6)

**ENTERED**

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/721,922A

DATE: 07/29/2004  
TIME: 09:40:12

Input Set : D:\seqlistcorrected2.txt  
Output Set: N:\CRF4\07292004\J721922A.raw

63 <151> PRIOR FILING DATE: 1999-08-27  
 65 <150> PRIOR APPLICATION NUMBER: DE 19940768.1  
 66 <151> PRIOR FILING DATE: 1999-08-27  
 68 <150> PRIOR APPLICATION NUMBER: DE 19940831.9  
 69 <151> PRIOR FILING DATE: 1999-08-27  
 71 <150> PRIOR APPLICATION NUMBER: DE 19940832.7  
 72 <151> PRIOR FILING DATE: 1999-08-27  
 74 <150> PRIOR APPLICATION NUMBER: DE 19941385.1  
 75 <151> PRIOR FILING DATE: 1999-08-31  
 77 <150> PRIOR APPLICATION NUMBER: DE 19941396.7  
 78 <151> PRIOR FILING DATE: 1999-08-31  
 80 <150> PRIOR APPLICATION NUMBER: DE 19942087.4  
 81 <151> PRIOR FILING DATE: 1999-09-03  
 83 <160> NUMBER OF SEQ ID NOS: 480  
 85 <210> SEQ ID NO: 1  
 86 <211> LENGTH: 1581  
 87 <212> TYPE: DNA  
 88 <213> ORGANISM: Corynebacterium glutamicum  
 90 <220> FEATURE:  
 91 <221> NAME/KEY: CDS  
 92 <222> LOCATION: (101)..(1558)  
 93 <223> OTHER INFORMATION: RXA02702  
 95 <400> SEQUENCE: 1  
 96 gcaggtaacg ctcacggat gattcagac atgattgtcaactatcaa tagccaacac 60  
 98 aactaaaacg accagctcaa cgcaaaggaa tagttaaag gtg acc act cca cac 115  
 99 Val Thr Thr Pro His  
 100 1 5  
 102 ttg gat tct gca caa gat att gat ctg tcc cgc gtc cac ctc atc ggt 163  
 103 Leu Asp Ser Ala Gln Asp Ile Asp Leu Ser Arg Val His Leu Ile Gly  
 104 10 15 20  
 106 att ggc gga gcc gga atg tct ggc gtt gcc cga atc ctg ctt gcc cgc 211  
 107 Ile Gly Gly Ala Gly Met Ser Gly Val Ala Arg Ile Leu Ala Arg  
 108 25 30 35  
 110 ggt aag aca gtc act ggt tcc gat gcc aaa gat tcc cgc acc ttg ctt 259  
 111 Gly Lys Thr Val Thr Gly Ser Asp Ala Lys Asp Ser Arg Thr Leu Leu  
 112 40 45 50  
 114 cca ctc cgc gcc gtg gga gcc acc atc gca gtg gga cac gct gcg gaa 307  
 115 Pro Leu Arg Ala Val Gly Ala Thr Ile Ala Val Gly His Ala Ala Glu  
 116 55 60 65  
 118 aac ctt gag ctt tcc ggc gaa ctt ccc acc gtc gtg gtc acc tct ttt 355  
 119 Asn Leu Glu Leu Ser Gly Glu Leu Pro Thr Val Val Val Thr Ser Phe  
 120 70 75 80 85  
 122 gcc gcc att ccg caa gac aac ccg gaa ctt gtt cgt gca cgt gaa gaa 403  
 123 Ala Ala Ile Pro Gln Asp Asn Pro Glu Leu Val Arg Ala Arg Glu Glu  
 124 90 95 100  
 126 ggc att ccg gtt att cgt cgc tcc gat ctg ttg ggc gaa ttg ctg gaa 451  
 127 Gly Ile Pro Val Ile Arg Arg Ser Asp Leu Leu Gly Glu Leu Leu Glu  
 128 105 110 115  
 130 ggc tcc acc cag gtc ttg atc gcg ggt acc cac ggt aag acc tcc acc 499

**RAW SEQUENCE LISTING** DATE: 07/29/2004  
**PATENT APPLICATION:** US/10/721,922A **TIME:** 09:40:12

Input Set : D:\seqlistcorrected2.txt  
Output Set: N:\CRF4\07292004\J721922A.raw

131	Gly Ser Thr Gln Val Leu Ile Ala Gly Thr His Gly Lys Thr Ser Thr			
132	120	125	130	
134	acc tct atg tct gtg gta gct atg cag gca gcg ggc atg gat cca agc	547		
135	Thr Ser Met Ser Val Val Ala Met Gln Ala Ala Gly Met Asp Pro Ser			
136	135	140	145	
138	ttt gct atc ggc gga cag ctc aac aag gct ggc acc aat gcg cac cat	595		
139	Phe Ala Ile Gly Gly Gln Leu Asn Lys Ala Gly Thr Asn Ala His His			
140	150	155	160	165
142	gga act ggt gag gtc ttt atc gct gaa gca gat gaa tct gac gca tcg	643		
143	Gly Thr Gly Glu Val Phe Ile Ala Glu Ala Asp Glu Ser Asp Ala Ser			
144	170	175	180	
146	ctg ctg cgc tac aag cca aat gtt gca gtg gtc acc aat gtg gaa cca	691		
147	Leu Leu Arg Tyr Lys Pro Asn Val Ala Val Val Thr Asn Val Glu Pro			
148	185	190	195	
150	gac cac ctg gac ttc ttt aaa acc cct gaa gcc tac ttc caa gtg ttc	739		
151	Asp His Leu Asp Phe Phe Lys Thr Pro Glu Ala Tyr Phe Gln Val Phe			
152	200	205	210	
154	gac gat ttc gca gga cgc atc acc ccc aac ggc aag ctg gtt gtg tgc	787		
155	Asp Asp Phe Ala Gly Arg Ile Thr Pro Asn Gly Lys Leu Val Val Cys			
156	215	220	225	
158	ctg aac gat cct cac gca gcg gag ctg ggg gag agg tct gtc cgc aag	835		
159	Leu Asn Asp Pro His Ala Ala Glu Leu Gly Glu Arg Ser Val Arg Lys			
160	230	235	240	245
162	ggt atc aag act gtt ggt tac ggt acc gct gac gcc gta cag gca cac	883		
163	Gly Ile Lys Thr Val Gly Tyr Gly Thr Ala Asp Ala Val Gln Ala His			
164	250	255	260	
166	cct gag gtt cca gcg atg gct acc atc gtg gat tcc caa gtt gtc gca	931		
167	Pro Glu Val Pro Ala Met Ala Thr Ile Val Asp Ser Gln Val Val Ala			
168	265	270	275	
170	gaa ggc acc cgc gcc acc atc aac atc gat gga cag gaa gta tct gtg	979		
171	Glu Gly Thr Arg Ala Thr Ile Asn Ile Asp Gly Gln Glu Val Ser Val			
172	280	285	290	
174	att ctt caa atc cct ggt gat cac atg gta ctc aac ggt gca gcc gcc	1027		
175	Ile Leu Gln Ile Pro Gly Asp His Met Val Leu Asn Gly Ala Ala Ala			
176	295	300	305	
178	ctg ctg gcc gga tac ctg gtg ggt ggg gac gtc gac aag ctt gtt gaa	1075		
179	Leu Leu Ala Gly Tyr Leu Val Gly Gly Asp Val Asp Lys Leu Val Glu			
180	310	315	320	325
182	ggc ttg tcg gat ttc tcc ggc gtg cga cgc cgc ttt gag ttc cac ggt	1123		
183	Gly Leu Ser Asp Phe Ser Gly Val Arg Arg Arg Phe Glu Phe His Gly			
184	330	335	340	
186	gct atc gag ggc ggc aaa ttt aat ggc gct gct att tat gat gat tac	1171		
187	Ala Ile Glu Gly Gly Lys Phe Asn Gly Ala Ala Ile Tyr Asp Asp Tyr			
188	345	350	355	
190	gca cac cac cca acg gaa gta act gca gtg ctc agc gct gcg cgc acc	1219		
191	Ala His His Pro Thr Glu Val Thr Ala Val Leu Ser Ala Ala Arg Thr			
192	360	365	370	
194	cgg gtg aag gcc gct gga aag ggc cgt gtc atc gtc gcg ttc caa cca	1267		
195	Arg Val Lys Ala Gly Lys Gly Arg Val Ile Val Ala Phe Gln Pro			

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/721,922A

DATE: 07/29/2004

TIME: 09:40:12

Input Set : D:\seqlistcorrected2.txt  
 Output Set: N:\CRF4\07292004\J721922A.raw

196	375	380	385	
198	cat tta tac tca cgc acc ata gaa ttc caa aag gag ttc gcg ggg gca			1315
199	His Leu Tyr Ser Arg Thr Ile Glu Phe Gln Lys Glu Phe Ala Gly Ala			
200	390	395	400	405
202	ctg tca ctg gca gac gct gcc gtg gtg ctt gag att tac gga gcg cgc			1363
203	Leu Ser Leu Ala Asp Ala Ala Val Val Leu Glu Ile Tyr Gly Ala Arg			
204	410	415	420	
206	gaa caa ccg gtg gat ggc gtg tcc tcg gaa atc atc acc gat gcg atg			1411
207	Glu Gln Pro Val Asp Gly Val Ser Ser Glu Ile Ile Thr Asp Ala Met			
208	425	430	435	
210	acc att cca gtg gtg tac gaa cct aat ttc tct gca gtc cca gaa cgc			1459
211	Thr Ile Pro Val Val Tyr Glu Pro Asn Phe Ser Ala Val Pro Glu Arg			
212	440	445	450	
214	att gca gaa atc gca gga cct aat gac atc gtg ctc acc atg ggt gca			1507
215	Ile Ala Glu Ile Ala Gly Pro Asn Asp Ile Val Leu Thr Met Gly Ala			
216	455	460	465	
218	ggt tcc gtg acc atg ctt gct cca gaa atc ctg gat cag ctg caa aac			1555
219	Gly Ser Val Thr Met Leu Ala Pro Glu Ile Leu Asp Gln Leu Gln Asn			
220	470	475	480	485
222	aat taggacgtaa gtgaacaagg cag			1581
223	Asn			
227	<210> SEQ ID NO: 2			
228	<211> LENGTH: 486			
229	<212> TYPE: PRT			
230	<213> ORGANISM: Corynebacterium glutamicum			
232	<400> SEQUENCE: 2			
233	Val Thr Thr Pro His Leu Asp Ser Ala Gln Asp Ile Asp Leu Ser Arg			
234	1	5	10	15
236	Val His Leu Ile Gly Ile Gly Gly Ala Gly Met Ser Gly Val Ala Arg			
237	20	25	30	
239	Ile Leu Leu Ala Arg Gly Lys Thr Val Thr Gly Ser Asp Ala Lys Asp			
240	35	40	45	
242	Ser Arg Thr Leu Leu Pro Leu Arg Ala Val Gly Ala Thr Ile Ala Val			
243	50	55	60	
245	Gly His Ala Ala Glu Asn Leu Glu Leu Ser Gly Glu Leu Pro Thr Val			
246	65	70	75	80
248	Val Val Thr Ser Phe Ala Ala Ile Pro Gln Asp Asn Pro Glu Leu Val			
249	85	90	95	
251	Arg Ala Arg Glu Glu Gly Ile Pro Val Ile Arg Arg Ser Asp Leu Leu			
252	100	105	110	
254	Gly Glu Leu Leu Glu Gly Ser Thr Gln Val Leu Ile Ala Gly Thr His			
255	115	120	125	
257	Gly Lys Thr Ser Thr Thr Ser Met Ser Val Val Ala Met Gln Ala Ala			
258	130	135	140	
260	Gly Met Asp Pro Ser Phe Ala Ile Gly Gly Gln Leu Asn Lys Ala Gly			
261	145	150	155	160
263	Thr Asn Ala His His Gly Thr Gly Glu Val Phe Ile Ala Glu Ala Asp			
264	165	170	175	
266	Glu Ser Asp Ala Ser Leu Leu Arg Tyr Lys Pro Asn Val Ala Val Val			

## RAW SEQUENCE LISTING

DATE: 07/29/2004

PATENT APPLICATION: US/10/721,922A

TIME: 09:40:12

Input Set : D:\seqlistcorrected2.txt

Output Set: N:\CRF4\07292004\J721922A.raw

267	180	185	190
269	Thr Asn Val Glu Pro Asp His Leu Asp Phe Phe Lys Thr Pro Glu Ala		
270	195	200	205
272	Tyr Phe Gln Val Phe Asp Asp Phe Ala Gly Arg Ile Thr Pro Asn Gly		
273	210	215	220
275	Lys Leu Val Val Cys Leu Asn Asp Pro His Ala Ala Glu Leu Gly Glu		
276	225	230	235
278	Arg Ser Val Arg Lys Gly Ile Lys Thr Val Gly Tyr Gly Thr Ala Asp		
279	245	250	255
281	Ala Val Gln Ala His Pro Glu Val Pro Ala Met Ala Thr Ile Val Asp		
282	260	265	270
284	Ser Gln Val Val Ala Glu Gly Thr Arg Ala Thr Ile Asn Ile Asp Gly		
285	275	280	285
287	Gln Glu Val Ser Val Ile Leu Gln Ile Pro Gly Asp His Met Val Leu		
288	290	295	300
290	Asn Gly Ala Ala Ala Leu Leu Ala Gly Tyr Leu Val Gly Gly Asp Val		
291	305	310	315
293	Asp Lys Leu Val Glu Gly Leu Ser Asp Phe Ser Gly Val Arg Arg Arg		
294	325	330	335
296	Phe Glu Phe His Gly Ala Ile Glu Gly Gly Lys Phe Asn Gly Ala Ala		
297	340	345	350
299	Ile Tyr Asp Asp Tyr Ala His His Pro Thr Glu Val Thr Ala Val Leu		
300	355	360	365
302	Ser Ala Ala Arg Thr Arg Val Lys Ala Ala Gly Lys Gly Arg Val Ile		
303	370	375	380
305	Val Ala Phe Gln Pro His Leu Tyr Ser Arg Thr Ile Glu Phe Gln Lys		
306	385	390	395
308	Glu Phe Ala Gly Ala Leu Ser Leu Ala Asp Ala Ala Val Val Leu Glu		
309	405	410	415
311	Ile Tyr Gly Ala Arg Glu Gln Pro Val Asp Gly Val Ser Ser Glu Ile		
312	420	425	430
314	Ile Thr Asp Ala Met Thr Ile Pro Val Val Tyr Glu Pro Asn Phe Ser		
315	435	440	445
317	Ala Val Pro Glu Arg Ile Ala Glu Ile Ala Gly Pro Asn Asp Ile Val		
318	450	455	460
320	Leu Thr Met Gly Ala Gly Ser Val Thr Met Leu Ala Pro Glu Ile Leu		
321	465	470	475
323	Asp Gln Leu Gln Asn Asn		
324	485		
327	<210> SEQ ID NO: 3		
328	<211> LENGTH: 1539		
329	<212> TYPE: DNA		
330	<213> ORGANISM: Corynebacterium glutamicum		
332	<220> FEATURE:		
333	<221> NAME/KEY: CDS		
334	<222> LOCATION: (101)..(1516)		
335	<223> OTHER INFORMATION: RXA02705		
337	<400> SEQUENCE: 3		
338	cgtgaccatc cgtttctggc tgatcgcgat catggctgtg ttggcggttg tcggtgtt 60		

RAW SEQUENCE LISTING ERROR SUMMARY                   DATE: 07/29/2004  
PATENT APPLICATION: US/10/721,922A               TIME: 09:40:13

Input Set : D:\seqlistcorrected2.txt  
Output Set: N:\CRF4\07292004\J721922A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:315; N Pos. 658

Seq#:387; N Pos. 71

Seq#:425; N Pos. 350,354,355,364,367

Seq#:427; N Pos. 11,12,14,17,24,28,29,62,88,91,97

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/721,922A

DATE: 07/29/2004

TIME: 09:40:13

Input Set : D:\seqlistcorrected2.txt

Output Set: N:\CRF4\07292004\J721922A.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application No  
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:29135 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:315 after pos.:643  
L:34118 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:387 after pos.:50  
L:37094 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:425 after pos.:349  
L:37137 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:427 after pos.:0  
L:37139 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:427 after pos.:60